

L^2 Moduli Spaces on 4-Manifolds with Cylindrical Ends (Vol. 1)

Table of Contents

1. L^2 Moduli Spaces
2. Manifolds with Boundary
3. $B^0(L)$, but mostly $R^0(L)$
4. σ - Decaying Spaces on $[0, \infty) \times L$
5. The Decay of Moduli Space
6. The σ - Moduli Space for a Generic Metric
7. Generic Metrics and Reducibility
8. Restrictions to, $[0, \infty) \times L$ and r
9. The Regular Connections
10. Estimates for the Non Regular Case
11. Circle Bundles Over Surfaces
12. $I \sigma$ When L is a Circle Bundle
13. The ODE on a Finite Interval
14. Estimates for Convergence
15. Circle Bundles for $k < 0$
16. L^2 Solutions on $[0, \infty) \times L$
17. The Moduli Space for the Half Cylinder
18. L^2 Solutions on M
19. L^2 -Spaces and Generic Metrics
20. L^2 Spaces on the Infinite Cylinder

Author: Clifford H. Taubes
 ISBN: 1-57146-007-1
 Year Published: 1993
 Binding: Hardcover
 Page: 205 pages
 Price: reg. \$42, sales **\$19**



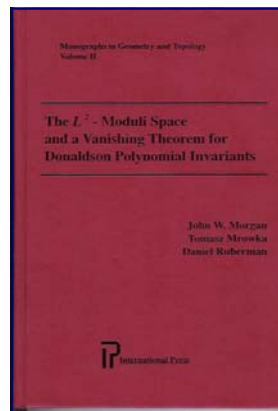
Description

This volume presents the extensive research of C. Taubes. It gives the readers a clear and concise explanation of L^2 Moduli Spaces on 4-Manifolds. This monograph discusses important results in the fields of Differential Geometry and Topology. It sets the framework for the more recent, important developments in these areas, and it is an essential reference for students and researchers in these fields.

L^2 Moduli Spaces and a Vanishing Theorem for Donaldson Polynomial Invariants (Vol. 2)

Table of Contents

1. Introduction, The L^2 moduli space
2. Chern-Simons flow and ASD connections on a cylinder
3. Regularity and Estimates for the Flow Equation: The Proof of Theorem 2.6.3
4. Existence of asymptotic value at infinity
5. The finite dimensional ODE dominating the Chern-Simons flow
6. Geometric limits as we stretch the tube out
7. The definition of the thickened moduli space
8. Structure of the fibers
9. A generic metrics theorem for the thickened moduli space
10. Slices and the local structure of $B^0_{(l,w)}(T_{\gamma}, T_0)$
11. Generalities on Stratified Spaces
12. The relationship of the center manifold to the Kuranishi picture for a general 3-manifold
13. Local data for the representation variety
14. The moduli space
15. The case of $SO(3)$ moduli spaces
16. A Vanishing Result for 4-manifolds split by certain 3-dimensional nilmanifolds



Authors: John Morgan,
 Tomasz Mrowka and Daniel
 Ruberman
 ISBN: 1-57146-006-3
 Year Published: 1994
 Page: 233 pp
 Price: reg. \$42, sales **\$19**

This monograph provides tools for the study of anti-self dual connections on 4-manifolds with cylindrical ends. The work has many applications to the most recent and important advances in mathematics. This book also describes a setup for dealing with the general problem of trying to understand Donaldson's invariants of a smooth four manifold X by stretching its metric out along a codimension-one embedded submanifold N . The main concern here is the local description of the moduli space of finite energy anti-self-dual (ASD) connections in a principal G bundle over a four manifold with cylindrical end.